

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled).

2. (Currently amended) The exchanger as claimed in claim [[1]] 20, further comprising a temperature probe borne by said casing which is able to shut down the burner when the temperature prevailing inside the casing exceeds a predetermined threshold.

3-19 (Canceled).

20. (Currently amended) A condensation heat exchanger associated with a gas or fuel burner, which comprises:

at least one bundle of tubes, wherein the bundle includes one tube, or a group of tubes arranged end to end, forming a helical winding, in which the wall of the tube or tubes is made of a highly thermally conductive material and has a flattened oval cross section, wherein the major axis of the cross section is perpendicular, or approximately perpendicular, to that of the helix, while the width of a gap separating two adjacent turns is constant and appreciably smaller than the thickness of said cross section, a fluid heated up, in particular cold water, for circulating inside the tube or tubes constituting said bundle; and

a gas-impermeable casing, wherein the bundle is fixedly mounted inside the gas-impermeable casing,

the casing having a sleeve for the discharge of the burnt gases,

wherein the exchanger is arranged such that the hot gases generated by the burner pass radially, or approximately radially, through said bundle via the gaps separating turns of the bundle, wherein said casing is made of heat-resistant plastic,

wherein the casing contains retaining devices for mechanically retaining said bundle in an axial direction of the bundle, these retaining devices being able to absorb thrust loads resulting from the internal pressure of the fluid which circulates therein and which tends to deform the walls thereof, while preventing these loads from being transmitted to the casing, and

~~The exchanger as claimed in claim 1~~, wherein said retaining devices comprise a set of ties which extend outside the bundle, parallel to the axis of the helix, and whose ends are fixed to bearing elements pressing against the two opposed faces of the bundle.

21. (Previously presented) The exchanger as claimed in claim 20, wherein the bearing element situated at one of the ends of the set of ties is a thin plate, wherein the plate includes a cut out in a central part of the plate and the plate has an annular shape.

22. (Previously presented) The exchanger as claimed in claim 21, wherein said plate serves as a facing which partially closes off an open face of the casing and is fastened to the latter at a periphery of the casing.

23. (Previously presented) The exchanger as claimed in claim 22, wherein end portions of the ties pass through said facing in such a way as to project slightly outward, and in that the end portions are threaded such that the end portions allow a door to be removably mounted against the facing by means of nuts.

24. (Previously presented) The exchanger as claimed in claim 23, wherein said door is fixed to the burner.

25. (Previously presented) The exchanger as claimed in claim 22, further comprising four ties arranged substantially in a square, and in that the bearing elements situated on the opposite side to said facing include a pair of arcuate or bent straps configured to follow the contour of the bundle as closely as possible and pressing against two diametrically opposed regions thereof, each strap being fastened to a pair of neighboring ties.

26. (Currently amended) The exchanger as claimed in claim ~~[[1]]~~ 20, wherein the casing is composing of a plastic that is a composite material based on glass-fiber-reinforced or glass-flake-reinforced resin.

27. (Previously presented) The exchanger as claimed in claim 26, wherein said resin is a compound of polyphenylene oxide, polystyrene and polypropylene.

28. (Currently amended) The exchanger as claimed in claim [[1]] 20, wherein the bundle includes two bundles of coaxial tubes situated end to end and connected to one another, one of which serves as a primary exchanger and the other as a secondary exchanger, and further comprising a deflecting member being sandwiched between the two bundles and thus arranged such that the hot gases generated by the burner pass first through the primary exchanger, passing through gaps separating turns of the bundle from the inside to the outside of the bundle, and then through the secondary exchanger, passing through gaps separating turns of the bundle from the outside to the inside, after which the hot gas is discharged via said sleeve.

29. (Previously presented) The exchanger as claimed in claim 28, wherein said deflector is fixed to said bundles of tubes.

30. (Previously presented) The exchanger as claimed in claim 28, wherein the burner is mounted inside said bundle serving as the primary exchanger, wherein said deflector has a discoid shape and is fixed to the end of the burner, and the deflector is equipped at a periphery of the deflector with a thermally insulating seal that presses against the inside of the bundle.

31. (Currently amended) The exchanger as claimed in claim [[1]] 20, wherein said casing is composed of two molded half-shells brought together and secured to one another.

32. (Currently amended) The exchanger as claimed in claim [[1]] 20, further comprising a shroud arranged outside said bundle and inside said plastic casing, wherein the shroud acts as a heat shield, and wherein the shroud is capable of insulating the casing from heat emitted by the burnt gases.

33. (Previously presented) The exchanger as claimed in claim 32, wherein said shroud is made from thin stainless steel sheet.

34. (Previously presented) The exchanger as claimed in claim 32, wherein said shroud is applied to the internal surface of said plastic casing so that the shroud is spaced a certain distance from the plastic casing.

35. (Previously presented) The exchanger as claimed in claim 34, wherein said shroud is spaced a certain distance from the plastic casing by a series of bosses stamped into a wall of the shroud.

36. (Previously presented) The exchanger as claimed in claim 32, wherein said shroud includes two complementary rounded parts brought together so as to form an annular casing fitting against the internal surface of said plastic casing.

37. (Previously presented) The exchanger as claimed in claim 36, wherein mutually facing edges of the rounded parts have a row of approximately semicircular or semioval notches which are able to tightly enclose the rectilinear end portions of the tube or tubes constituting the winding when these rounded parts are brought together.